

REMARKS**I. INTRODUCTION**

In response to the Office Action dated June 2, 2005, the claims have not been amended. Claims 1-24 remain in the application. Re-consideration of the application is requested.

II. REAL PARTY IN INTEREST

The real party in interest is Autodesk, Inc., the assignee of the present application.

III. STATUS OF CLAIMS

Claims 1-24 stand rejected.

IV. STATUS OF AMENDMENTS

No amendments to the claims have been made subsequent to the final Office Action.

V. SUMMARY OF CLAIMED SUBJECT MATTER

Independent claims 1, 9, and 17 are generally directed to annotating a video clip/sequence of frames (see page 1, lines 1-5). A computer program obtains a video clip and annotation information that identifies a particular frame in the video clip, an annotation, and a location on the particular frame to display the annotation (see page 3, lines 5-7; page 5, lines 9-11; page 7, lines 8-10; page 9, lines 17-20; FIG. 2). The computer program proceeds to display the sequence of frames and then determines (automatically) when the particular frame is displayed at which point the program automatically pauses the display (see page 3, lines 8-9; page 5, lines 11-13; page 9, lines 22-25; FIG. 2; page 10, lines 10-11; FIG. 3C). The annotation is then displayed at the specified location (see page 3, lines 8-9; page 5, lines 11-13; page 5, lines 25-26; FIG. 2; page 10, lines 10-13; FIG. 3C). The video clip remains paused until the user elects to proceed at which point the sequence of frames then continues to display (see page 9, line 26-page 10, line 2; FIG. 2; FIGS. 3A-3E; page 10, lines 13-15).

Dependent claims 2, 10, and 18 provide that the annotation is text (see page 7, lines 10-11; page 9, lines 10-11; FIG. 3C).

Dependent claims 3, 11, and 19 provide that the annotation is an arrow (see page 7, lines 10-15; FIG. 3C).

Dependent claims 4, 12, and 20 provide that the annotation is a primitive shape (see page 7, lines 10-15; FIG. 3C).

Dependent claims 5, 13, and 21 provide that the sequence of frames is an animation (see page 2, lines 21-22; see page 6, lines 15-17; FIGS. 3A-3E).

Dependent claims 6, 15, and 22 provide that the sequence of frames is a video (see page 2, lines 21-22; and page 6, lines 15-17).

Dependent claims 7, 16, and 23 provide that the annotation information is defined based on an XML schema (see page 3, lines 10-15; page 8, line 1-page 9, line 15).

Dependent claims 8, 17, and 24 provide that the display of the annotation is an overlaying of the annotation on the paused frame at the specified location (see page 3, lines 8-9; page 5, lines 11-13; page 7, lines 2-3; FIG. 2 and FIGS. 3A-3E).

VI. ISSUES TO BE REVIEWED

Claims 1, 9, and 17 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Covington et al., U.S. Patent No. 5,524,193 A (Covington) in view of Ubillos, U.S. Patent No. 5,999,173 A (Ubillos).

Claims 2-6, 8, 10-14, 16, 18-22, and 24 stand rejected under 35 U.S.C. §103(a) as being unpatentable by Covington in view of Ubillos.

Claims 7, 15, and 23 stand rejected under 35 U.S.C. §103(a) as being unpatentable by Covington in view of Ubillos and further in view of Gupta et al., U.S. Patent No. 6,484,156 B1 (Gupta).

Applicant requests review and reconsideration of all of these rejections.

VII. ARGUMENT

A. Independent claims 1, 9, and 17 Are Patentable Over the Cited Art

Applicant respectfully traverses the above described rejections for one or more of the following reasons:

(1) Neither Covington, Ubillos, nor Gupta teach, disclose or suggest a computer program determining when a particular frame has been displayed;

(2) Neither Covington, Ubillos, nor Gupta teach, disclose or suggest a computer program automatically pausing the display of the sequence of frames at the particular frame; and

(3) Neither Covington, Ubillos, nor Gupta teach, disclose or suggest continuing to display the sequence of frames subsequent to the identified frame when a user elects to proceed.

As described above, independent claims 1, 9, and 17 are generally directed to annotating a video clip/sequence of frames. A computer program obtains a video clip and annotation information that identifies a particular frame in the video clip, an annotation, and a location on the particular frame to display the annotation. The computer program proceeds to display the sequence of frames and then determines (automatically) when the particular frame is displayed at which point the program automatically pauses the display. The annotation is then displayed at the specified location. The video clip remains paused until the user elects to proceed at which point the sequence of frames then continues to display.

The cited references do not teach nor suggest these various elements of Applicant's independent claims.

Covington merely describes an invention providing an improved method for annotating a text document or other media event with any other media event or events. One aspect of Covington allows authors to quickly and easily, without the hard programming of the prior art, create a sequence of media events that are connected to a particular word or phrase in a text, a portion of a graphic illustration, or to an audio or video clip. The media events used in a sequence may be selected from a library of media events, or may be created by the user from scratch or by modifying existing media events. Another aspect of Covington allows a trigger, and the sequence of media events connected to that trigger, to be associated with a particular "filter". A "filter", as the term is used in Covington, is a particular grouping of triggers. Any desired number of filters and triggers may be created.

Thus, Covington merely provides the ability to annotate/organize a sequence of events. The Office Action relies on Fig. 5 and col. 9, line 50-col. 10, line 30 to teach various aspects of the claimed invention. This portion of Covington merely describes how a user can select and compile a sequence of different events that are connected to a particular trigger that a user can select. In other

words, Covington specifically provides for displaying particular events only when a user selects a particular trigger from one of the displayed reels (see col. 9, line 33-col. 10, line 32). Thus, instead of the computer program automatically determining and pausing a video clip at a particular frame and displaying an annotation, Covington's FIG. 5 merely describes the ability for a user to set up and interact with various reels and by clicking on a particular frame within a reel, displaying a subsequent event. Such a teaching does not describe, suggest, or allude to, implicitly or explicitly, the capability to pause a video clip on a particular frame to display an annotation.

Unlike the present invention, Covington merely allows a user to manually play and stop a sequence of frames. There is no capability for the computer program to automatically determine when a particularly identified frame has been reached and then automatically pause the display at that frame. Instead, Covington explicitly states that the play buttons provide for normal and fast forward scanning of video on a storage media (see col. 12, line 66-col. 13, line 1). Such "normal" scanning is not even remotely similar to the determining and pausing performed by the present invention. Further, Covington completely fails to teach any "determining" step whatsoever.

In addition to the above, once the claimed video clip has been automatically paused and the annotation has been displayed, the amended claims provide that the video clip will continue displaying once the user has elected to proceed. Such a teaching is completely lacking from Covington and the other cited references.

The Office Action admits that Covington fails to teach the determining and pausing steps set forth in the present claims. To teach these claim aspects, the Office Action relies on Ubillos col. 2, lines 35-60 and col. 3, lines 20-30. Further, to teach the continued display of the sequence of frames, the final Office Action relies on Ubillos, col. 3, lines 35-40. Ubillos col. 2, lines 35-60 provides:

SUMMARY OF THE INVENTION

The invention is a method and apparatus for video editing, in which video clips (and optionally also still image clips and audio clips) are stored as digital data in a computer memory, selected clips are displayed in elongated windows (known as "tracks") on a display screen, and editing operations are performed on the clips in response to manipulation of displayed cursors and icons to assemble and preview an edited video program.

The preferred embodiment of the inventive apparatus is a computer system programmed to display representations of video, still image, and audio clips at desired positions along a displayed time ruler, in tracks of a construction window. The system dynamically generates each video clip to be displayed by retrieving from storage all frames of the video clip (or every "Nth" frame of the stored clip in accordance with a user-selected time compression factor), and displaying the retrieved frames.

Animated "special effect" icons, each representing a special effect, are displayed in a separate special effects track also oriented parallel to the time ruler. Each special effect icon can represent a special effect transition between two clips (such as a dissolve, fade, and wipe).

As can be seen from this text, Ubillos merely describes video editing software. The software enables a video clip to be displayed. More generally, every N'th frame stored in a clip may be displayed. Special effects may also be displayed on a separate track. However, contrary to that asserted in the final Office Action, there is no description or suggestion, implicit or explicit, for displaying the sequence of frames and automatically pausing the display of the frames at a particular frame. In this regard, merely displaying certain frames in a sequence does not even remotely allude to determining if a particular frame has been displayed and then pausing the display of the sequence at such a frame.

Col. 3, lines 17-30 provide:

4. control superimposition of an overlay clip (representing video, still image, or text) with a main (video or still image) clip by displaying the clips in separate tracks, displaying a level control icon in alignment with the overlay clip, and manipulating the level control icon to display a graph representing a time-varying weighting function for combining the main and overlay clips;

5. preview a video program defined by clips displayed in a desired sequence along a time ruler of a construction window by retrieving the clips from memory, processing the retrieved clips (for example, in accordance with special effects transitions defined by transition icons displayed along the time ruler), and sequentially displaying the processed clips as a preview in a separate video window;

This portion of the Ubillos merely describes how a clip may be overlaid with a main clip. In this regard, clips are displayed in separate tracks and a graph may be used to combine the main and overlay clips. Further, a video program may be previewed by displaying the clips along a time ruler while sequentially displaying processed clips in a separate window. Nowhere in the cited portion (or the remainder of Ubillos) is there even a remote description of the automatic pausing of a sequence of frames at a particular frame. Merely displaying a clip in a desired sequence along a time ruler completely fails to pause the display of a sequence of frames at a particular frame.

The final Office Action asserts that displaying clips in a desired sequence along a time ruler of a construction window by retrieving clips from memory is equivalent to automatically pausing the display of frames at an identified frame. Applicant submits that such an interpretation is wholly without merit and is completely illogical. Nowhere is Ubillos' clip paused or automatically paused whatsoever. Instead, clips are merely retrieved and displayed continuously without any mention or remote description of a pause in a display of such clips (as claimed). In this regard, pausing the display of a sequence of frames at a particular frame (as claimed) is not even contemplated or

alluded to by Ubillos. In fact an electronic search of Ubillos for the term "paus" provides no results whatsoever. Without even mentioning the word "pause" or "pausing", Ubillos cannot possibly teach a claim limitation directed towards pausing the display of a sequence of frames.

Under MPEP §2142 and 2143.03 "To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). "All words in a claim must be considered in judging the patentability of that claim against the prior art." *In re Wilson*, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970)." The pending final Office Action simply overlooks any meaning in the verb "pausing" or "pause" as used in the independent claims. Such an interpretation fails to establish a *prima facie* case of obviousness.

To teach the displaying of the annotation at a particular location on the identified frame (as claimed), the Office Action merely submits that Ubillos' display of every Nth frame meets the limitation. Applicant submits that the Office Action is misinterpreting Ubillos use of every Nth frame. In Ubillos, every Nth frame is retrieved and displayed. In this regard, Ubillos does not disclose displaying a particular clip on every Nth frame. Instead, Ubillos merely displays every Nth frame. Such a display is contrary to the claims that recite the display of an annotation on a particular frame. In this regard, the actions performed in Ubillos are not even comparable to that set forth in the present claims.

To teach the continued display of the sequence of frames when the user elects to proceed, the Office Action relies on Ubillos col. 3, lines 35-40. This portion of Ubillos merely describes processing selected clips by filtering video data with a time-varying mosaic filter. Col. 13, lines 29-50 describe Ubillos' mosaic filter:

A mosaic filter divides the frames of the displayed clip into a grid of squares, and makes each square the average color of all the pixels within the square. The user can set the effect of the mosaic filter to gradually increase or decrease as the clip plays by adjusting "Start" and "End" control icons displayed in the mosaic filter control menu. By lengthening "Start" control icon 92, the user increases the level of the mosaic filter at the start of the clip (i.e., increases the size of the squares into which the first frame of the clip is divided). Similarly, by lengthening "End" control icon 94, the user increases the level of the mosaic filter at the end of the clip (i.e., increases the size of the squares into which the last frame of the clip is divided). The system is preferably programmed to interpolate the level of the temporally varying mosaic filter for intermediate frames of the clip. When the user has defined a temporally varying mosaic filter for a clip, and then enters the preview command, the system filters the digital data corresponding to each frame of the clip (in accordance with the defined mosaic filter) before displaying the filtered clip in the preview window.

As described in Ubillos, such a filter is merely a method for producing colors in a clip using a grid and squares. The filter varies over the timing of the clip. However, there is no capability to automatically stop a clip during the mosaic sequence followed by a continued display of the mosaic sequence after a user elects to proceed. In this regard, merely varying how slow or fast a clip is played is not even remotely similar to automatically pausing a display, displaying an annotation on a frame, and then continuing when a user elects to proceed. Accordingly, Ubillos does not and cannot describe, teach, or suggest the invention as claimed.

In view of the above, Applicant submits that Covington fails to teach, disclose, or suggest, the invention as claimed. Further, neither Ubillos nor Gupta cure Covington's deficiencies.

B. Dependent Claims 7, 15, and 23 Are Patentable Over the Cited Art

As stated above, these claims provide that the annotation information is defined in conformance with an XML schema. Accordingly, rather than merely abstractly citing the use of XML, these claims specifically provide that the annotation information is defined in XML. Further, the independent claims are all very specific in defining annotation information. In this regard, annotation information consists of an identification of a frame, an annotation, and a location on the identified frame to display the annotation. Claims 7, 15, and 23 provide that all of these elements must be in compliance with an XML schema.

In rejecting these claims, the Office Action relies on Gupta. However, Gupta merely mentions the use of XML. In this regard, Gupta fails to describe the defining of an annotation using XML. In addition, Gupta fails to provide for the use of XML to define each of the annotation information elements as set forth in the claims.

In addition, Gupta fails to teach, describe, or suggest, implicitly or explicitly, the capability to automatically pause a display of a video clip/stream at a particular frame, display an annotation at a particular location on the particular frame, and then continue displaying when the user elects to proceed. Instead, Gupta merely describes the ability to annotate a presentation and the ability to specify a particular time range in the video clip during which an annotation is displayed (see col. 8, lines 10-37). In this regard, Gupta fails in at least one benefit of the present invention which allows the annotator to determine when a video clip is paused thereby allowing the viewer more time to read/view the annotation before proceeding (see page 10, lines 5-23 of the present specification).

Thus, Gupta does not provide the capability for an automatic determination and pausing of a video clip at an annotated location (as claimed).

In view of the above, Applicant respectfully requests reconsideration of the rejection of these dependent claims and submit that they are in condition for allowance.

VIII. CONCLUSION

In view of the above, Applicant submits that the various elements of Applicant's claimed invention together provide operational advantages over the systems disclosed in Covington, Ubillos, and Gupta. In addition, Applicant's invention solves problems not recognized by Covington, Ubillos, and Gupta.

Thus, Applicant submits that independent claims 1, 9, and 17 are allowable over Covington, Ubillos, and Gupta. Further, dependent claims 2-8, 10-16, and 18-24 are submitted to be allowable over Covington, Ubillos, and Gupta in the same manner, because they are dependent on independent claims 1, 9, and 17, respectively, and because they contain all the limitations of the independent claims. In addition, dependent claims 2-8, 10-16, and 18-24 recite additional novel elements not shown by Covington, Ubillos, and Gupta.

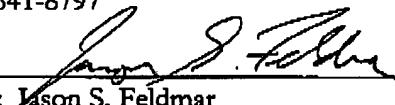
Accordingly, it is submitted that this application is now in good order for allowance and such allowance is respectfully solicited. Should the Examiner believe minor matters still remain that can be resolved in a telephone interview, the Examiner is urged to call Applicant's undersigned attorney.

Respectfully submitted,

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